## **HI-TECH PROJECTS**

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### INDUSTRIAL LAUNDRY AND DRY **CLEANING [3312]**

Dry-cleaning and Laundry business is profitable business now-a-days because in today's modern life, no one has got the time to wash and clean their own clothes and apart from these, there are many other reasons that rich people are more prefer to wash and clean their expensive . Sarees, Trousers, Skirts, Shirts, Frocks and especially Silk Sarees and Dress materials through the Dry Cleaners only. Laundry work is very well known process of cleaning all types of linens, clothing & carpets etc. Working conditions are not likely to be ideal, but much can be done to overcome drawbacks and inconvenience by orderly arrangement, and sometimes by structural improvements. Due regard must be paid to the question of providing for facilities to ensure satisfactory results. Some most important utilities can be as under: 1. Light & Ventilation, 2. Supply of gas & electricity. 3. Hot water supply. 4. Storage accommodation. And 5. Ideal equipments. A five-star hotel should of the latex products sector. It is no provide all these amenities to run a laundry Laundries can work work shop. independently or as an ancillary unit of a big hotel. A five-star hotel uses a wide variety of carpets, sheets, Bed-covers, Pillow covers, Curtains, Costumes, Towel, Napkins, Table covers etc. In order to keep the usable in perfectly clean position, a laundry service is highly essential. There are a large number of five-star hotels in and around Delhi. Laundry workshops have a very good scope

### COST ESTIMATION

Plant Capacity 500 Kgs./Day Land & Building (500 sq.mt) Rs. 63 Lacs Plant & Machinery Rs. 50 Lacs W.C. for 2 Months Rs 14 41 Lacs Total Capital Investment Rs. 1.52 Cr. Rate of Return 17% Break Even Point 67%

### LACTIC ACID [3313]

Lactic Acid occurs as a colorless or vellow. syrupy liquid consisting of a mixture of lactic acid (C3H6O3) and lactic acid lactate (C6H10O5). It is obtained by the lactic fermentation of sugars or is prepared synthetically. It is usually available in solutions containing the equivalent of from 50% to 90% lactic acid. It is hygroscopic, and when concentrated by boiling, the acid condenses to form lactic acid lactate, 2-(lactoyloxy) propanoic acid, that on dilution and heating hydrolyzes to Lactic Acid. It is miscible with water and with alcohol. Function: Acidifier. Lactic acid (2-Hydrox) propanoic acid, L-hydroxy propionic acid) is a fermentation product of molasses glucose. It occurs wildly in nature. It is the principal acid constituents of sour milk & a normal constituent of blood & muscle tissue of animals. Lactic acid is a very important industrial Chemical & is

consumed, by many industries like food, beverages, plastics, textile leather industry etc. Lactic acid has a pleasant sour taste but no odour. It is completely miscible with water, alcohol, & other, although it is insoluble in chloroform; then it does not crystallise from solution as do as do other acids. Also, its low melting point means that it is a liquid at most encountered temperature. It is a weak acid with good solvent properties & it polymerizes readily for the production of polymers. In addition many of its salts are quite soluble in water COST ESTIMATION

Plant Capacity 5 Tons/Day Land & Building (5000 sq.mt) Rs. 6.79 Cr. Plant & Machinery Rs. 3.93 Cr. W.C. for 3 Months Rs. 1.21 Cr Total Capital Investment Rs. 12.42 Cr. Rate of Return 47% Break Even Point

### SURGICAL GLOVES DIPPING PLANT [3314]

In the light of the remarkable performance wonder that the sector has now attracted a greater share of the interest in manufacturing. However the smallness of domestic market will have to be realized and new entrepreneur will have to look towards international demand. consumption of NR latex is increasing continuously in world since 1980. Some of the latex product like surgical gloves are likely to have very high demand Malaysia with its comparative cost advantage can exploit this opportunity Malaysia at present in satisfying 3/4 of world demand for N.R. latexes. But in latex products it's share is much smaller than

### COST ESTIMATION

Plant Capacity 70000 Nos/Day Land & Building (3000 sq.mt) Rs. 1.63 Cr Plant & Machinery Rs. 2 Cr. W.C. for 2 Months Rs. 1.39 Cr. Total Capital Investment Rs. 5.29 Cr. Rate of Return 55% Break Even Point 47%

### **BAMBOO FIBRE MAT BOARD/ BAMBOO MAT BOARD [3315]**

Bamboo mat boards (BMB) are produced from woven mats of bamboo that are soaked in adhesive resin and then pressed firmly together in a hot press. They were the first of the wide range of different panel boards presently available that use bamboo as a raw material, but they are the simplest to produce, involve only bamboo raw materials and have great income generating potential for the rural poor, who are able to weave the mats from which they are formed. The technology for the manufacture of BMB in India has been developed by the Indian Plywood Industries Research Institute (IPIRTI), Bangalore, who have developed a

technically feasible and commercially viable technology for its manufacture. BMB is gaining in popularity and there are currently a handful of BMB factories in operation in India and 16 in China. Bamboo mat board is very versatile and can be produced up to 6 mm thick by varying the number of mat layers used; boards are usually formed of 2, 3, 5 or 7 mats. For thicker laminated boards, wood veneers are interleaved with the bamboo boards to produce bamboo mat-veneer composite boards (the production of these is not covered in this TOTEM). BMB is at least as durable and stable as wood-based plywood and is very resistant to pest attack, extreme climatic conditions and fire. It can be used for many of the uses to which plywood is now put such as paneling, ceilings, prefabricated shelters, packing cases and storage bins, roofs, doors and door panels, furniture, and household utensils such as travs and plates. BMB is much more flexible than . wood-based-plywood and can be used in structural applications such as stressed skin panels, wall bracings and web beams for which plywood is not suitable. The first recorded production of bamboo based panels was in China during the mid 1940s where bamboo mat board bonded with casein (enamel) glues was used in the interior of aeroplanes as an alternative to aircraft-grade plywood. At about the same time research was initiated in India to develop synthetic resinbonded bamboo mat board, for which the technology became available a decade and a half later. Since then, research has been carried out in several countries and over 30 types of panel products have been developedsome made of bamboo only and others of bamboo in combination with wood. lignocellulosic materials and inorganic materials. Research and development efforts have been mostly confined to countries of the AsiaPacific region i.e. China, India, Indonesia, Japan, Laos, Malaysia, Philippines, Taiwan, Thailand and Vietnam. Canada (in collaboration with Costa Rica) is the only country outside Asia where research on bamboo panels is being carried out. Although there was some pioneering work in Taiwan and innovative products such as plybamboo (bamboo glue-lam) were developed, the bamboo board industry is reported to be facing extinction there due to the sharp increase in wages and shortages of raw materials. In Thailand, the only product manufactured is bamboo mat board glued with Urea Formaldehyde (UF) resin and this is mainly produced for export. In countries such as Laos, the Philippines and Vietnam, interest in bamboo matboard production is relatively new, and the industries there are presently in the phase of exploratory studies and experimental or pilot scale production.

## **Best Industries to Start and Grow**

### **COST ESTIMATION**

 Plant Capacity
 15 Cubic Mtr./Day

 Land & Building (3000 sq.mt)
 Rs. 1.58 Cr.

 Plant & Machinery
 Rs. 1.96 Cr.

 W.C. for 2 Months
 Rs. 2.85 Cr.

 Total Capital Investment
 Rs. 6.55 Cr.

 Rate of Return
 30%

 Break Even Point
 53%

### TOY CAR MANUFACTURING AND LIFE SIZE BATTERY OPERATED TOY CARS [3316]

Toys that kids can ride on or in have always been popular from the days of wooden rocking horses all the way to today's more advanced, high-tech electric cars for kids Over the past decade, the market for powered ride on toys has exploded with new styles, technology, features, gadgets and...price, of course. This explosion in options is great for kids, but makes it increasingly difficult for parents to determine what electric car is best for their child. The 5 to 7-year-old age group has a great deal of overlap with the top end of the 2 to 4-year-old group, but at the higher end of the group, there are some marked differences in available options and designs. In this age group the electric cars start go faster and more styles are available, like 3-wheeled motorcycles and dune buggies. The electric cars for kids in this age group start to look like real vehicles. Most of these models are exact scale replicas of the actual car. The Dodge Viper SRT Convertible by Kid Trax is a great example. It has a higher max speed of 6 MPH and has realistic styling and features real engine sound, electric horn, FM radio, and MP3 input. It also has authentic chrome clad wheels, chrome exhaust tip, and Viper snake eyes and fangs LED running lights. What child wouldn't love to race around the driveway in their very own Viper! This age group is a difficult one because kids start gravitating out of the 'toy' car versions and as they get older, may get interested in things like go-karts and buggies. If your child is at the higher end of this age group, you may want to look at the next age group for the faster, more advanced options. The car is one of the most popular styles for electric cars for kids, especially for smaller kids, because they are low to the ground and there are many different makes and models to choose from. There are also different kinds of cars including replicas of luxury models like the Mercedes-Benz SLK pictured here, which is currently on sale at over \$200 off the MSRP. The cars are also more popular for smaller and younger kids because they tend to be a little bit safer They have a much lower center of gravity than some of the larger trucks and SUV types which makes them less likely to rollover onto the driver.

### **COST ESTIMATION**

### ALUMINIUM COMPOSITE PANELS (ACP) WITHOUT COIL COATING [3317]

Aluminium Composite Panels (ACP) are mainly light-weight composite material consisting of two pre-finished aluminium cover sheets heat-bonded (laminated) to core made of polyethylene plastic material, available in 3mm, 4mm, and 6mm thicknesses after finishing and can be curved and bent to form corners. These panels are used widely as exterior covering of commercial buildings and corporate houses. While adding to aesthetic beauty of the structure, they are also resistant to acid. alkali salt spray, pollution and provide good thermal as well as sound insulation. These Panels are widely used due easy maintenance in almost any kind of climate through normal wash with water and mild detergent that ensures long lasting performance. Aluminium Composite Panels consist of two thin sheets of aluminium continuously bonded to a polyethylene core. This polyethylene core of the aluminium composite panel is faced with two thin sheets of aluminium. The aluminium is bonded onto the core during the manufacturing process and it is virtually impossible to separate the layers of material once they have been bonded. The dust in air cannot stick on this panel face strongly. Even dust encloses cladding face, cleaning job is very easy, operator can use nature water to wash the panel face, dust will disappear, no scratching marks, a new bright cladding face will appear again.

### COST ESTIMATION

 Plant Capacity
 5000 Sq.mt/Day

 Land & Building (6000 sq.mt)
 Rs. 5.46 Cr.

 Plant & Machinery
 Rs. 2.60 Cr.

 W.C. for 1 Month
 Rs. 4.96 Cr.

 Total Capital Investment
 Rs. 13.45 Cr.

 Rate of Return
 72%

 Break Even Point
 34%

### BIODEGRADABLE DIAPERS MANUFACTURING [3318]

Diaper companies produce disposable biodegradable diapers that contain materials that are less harmful to the environment. In some cases, companies are combining both cloth and eco-friendly disposable components to make what is referred to as a "hybrid" diaper. GroVia offers one of the best known hybrid diapers, which lets you choose between

cloth absorbency or a disposable absorbency layer which is made primarily from biodegradable and compostable materials. These have the added benefit of being free of chlorine and perfumes with a core made of sustainably harvested wood pulp fibers. This type of absorbency layer can be used and thrown away just like a disposable diaper, except that it is designed to decompose much faster Hybrid diapers can be an easy, eco-friendly solution to the problem of disposable diapers. Baby diaper may be a newly developed product for India, where as for European countries it has become a general necessity for newly born child caretaking It was developed & marketed by a Swedish firm some time in the year 1958. As a matter of fact a diaper is used for wrapping the newly born or pretty young children who have not get developed the fixed routine for making water or latrine. He or she may discharge at any time which creates a lot of trouble to his mother or caretaker. Who has no convenient place or time to attend the baby while for an outing, shopping, going to movies or friends & relatives? To avoid all trouble they just wrap their babies with the diaper & baby may discharge whenever he feels to. It can retain the wetting for about two hours or so. Till then his mother finds a suitable time & place & removes the diapers, through it away & replace now one. This way it has given a lot of relief to new mothers. A disposable diaper consists of an absorbent pad sandwiched between two sheets of nonwoven fabric. The pad is specially designed to absorb and retain body fluids, and the nonwoven fabric gives the diaper a comfortable shape and helps prevent leakage. These diapers are made by a multi-step process in which the absorbent pad is first vacuum - formed then attached to a permeable top sheet and impermeable bottom sheet. The components are sealed together by application of heat or ultrasonic vibrations Elastic fibers are attached to the sheets to gather the edges of the diaper into the proper shape so it fits snugly around a baby's legs and crotch. When properly fitted, the disposable diaper will retain body fluids which pass through the permeable top sheet and are absorbed into the pad Disposable diapers are a relatively recent invention. In fact, until the early 1970s mothers had no real alternative to classic cloth diapers. Cotton diapers have the advantage of being soft, comfortable, and made of natural materials. disadvantages include their relatively poor absorbency and the fact that they have to be laundered. Disposable diapers were developed to overcome these problems The earliest disposables used wood pulp fluff, cellulose wadding, fluff cellulose, or cotton fibers as the absorbent material

These materials did not absorb very much

## **Start Your Own Industry**

moisture for their weight, however, Consequently, diapers made from these materials were extremely bulky. More efficient absorbent polymers were developed to address this issue. Since the 1970s, disposable diaper technology has continued to evolve. In fact, nearly 1.000 patents related to diaper design and construction have been issued in the last 25 years. Today's diapers are not only highly functional, they include advanced features such as special sizing and coloring for specific gender and age, color change indicators to show when the child is wet and reattachable VelcroTM-type closures. These innovations have enabled disposables to capture a large share of the diaper market. In 1996, disposable diaper sales exceeded \$4 billion in the United States alone. Proctor and Gamble and Kimberly Clark are the two largest brand name manufacturers, and their sales account for nearly 80% of the market. Private label manufacturers that produce store brands and generic diapers account for most of the remaining 20%

### COST ESTIMATION (US\$)

 Plant Capacity
 48000 Nos/Day

 Land & Building (2000sq.mt)
 US\$ 1.53 Lacs

 Plant & Machinery
 US\$ 3.83 Lacs

 W.C. for 1 Month
 US\$ 2.55 Lacs

 Total Capital Investment
 US\$ 8.04 Lacs

 Rate of Return
 71%

 Break Even Point
 33%

### ESSENCE/FLAVOUR USED IN PAN MASALA [3319]

Among the synthetics in common use for certain applications: as indicated are anethole (anice licorice for cough drops and chewing gum; Benzyl acetate (fruit raspberry and cherry) for candies and soft drinks, cinnamaldehyde (cinnamon) for leaked goods. Chewing gun, and leaked goods. Methyl anthranilite (comcood grapse) for candies and soft drinks. The flavour chemist is responsible for the basic knowledge of sensory and application properties of each of this large number of raw materials. The tremendous number of possible combinations of these flavoured finished compounds is readily apparent. It is not uncommon to develop a flavour that combines essential oils, plant extractives, fruit juices and synthetics Simple flavours are those containing a single a ingredient alone of diluted in appropriate neutral carrier; compound flavours are blends of several ingredients either as mixture of them alone or diluted in carriers (solvents). The presence of alcohol as solvent is of very important significance, therefore alcohol should be substituted whenever feasoble with carbitols, glycerin or other approved functional carriers. Flavour ingredients may also be classified as solid, liquid, paste etc. Crystalline mixtures of flavour ingredients are rare some of them being vanillin, coumerin, propenylgueethol and ethyl vanillin. Flavour ingredients in powered form (more or less hygrocopic) are more common e.g. coffee, orange juice They are useful for flavouring, puddings, pastry and sweets. They may contain dyes, sugar etc. for added convenience and are usually derived from essential oils. Powdered flavour essences into lactone, magnesium carbonate or other solid carriers; spice oleoresine plated onto salt are also important. The former products, with or without added dyes are intended for use by the pastry industry. Liquid flavours constitute by for the most numerous class of ingredients. They diffuse readily into the substance. They can be oily liquids such as essential oils and oleoressins, or non-oily when obtained by dissolving the active flavour principles in an appropriate solvent, normally alcohol. Fluid extracts are solutions of either single or compounded flavour ingredients while compounded oils are formulatted mixtures of essential oils. Isolates, synthetics etc, containing a small amount of solvent Compounded oils can be alcoholic or nonalcoholic. Small amount of alcohol or other solvent improves the dispersibility of the ingredients; these are used in pastry and liquids in industry. Alcoholate in a product obtained by macreation in alcohol of a specific concentration of heros and spices for a sufficiently long time to effect dissolution of the one or more flavour ingredients. These are some-what similar to tinctures and are labeled with respect to the percent content of the extracted flavour ingredients. A tincture is obtained prolonged maceration or percolation in an alcoholic solution of definite strength The ratio of flavour ingredient to alcohol is obtained by maceration in maximum strength alcohol (95-96%) and implies the alcohol becomes fixed or part of the flavour ingredient. Distillates are obtained when alcoholic extracts are separated from the plant residue of filtration, decantation, or expression and subsequently distilled. The residuting product containing some alcohol also since the ingredients and solvent co-distill. Infusions or percolats are aqueous or alcoholic solutions of flavour ingredients prepared by extraction with a hot solvent. Spirits are prepared by mixing alcoholates, tinctures, and distillates in specific ratios. Soluble essences are alcoholic or non-alcoholic solutions of simple or compounded flavour ingredients derived from essential oils They are soluble in syrps. They are aqueous solutions of essential oils after removing insoluble terpense by cold solvent washing and are used for carbonated and non-carbonated

### COST ESTIMATION

 Plant Capacity
 200 Kgs/Day

 Land & Building (300 sq.mt)
 Rs. 44 Lacs

 Plant & Machinery
 Rs. 4.07 Lacs

 W.C. for 1 Month
 Rs. 2.39 Cr.

 Total Capital Investment
 Rs. 2.91 Cr.

 Rate of Return
 68%

 Break Even Point
 26%

### VIBRATED CASTED/VERTICAL CASTING R.C.C PIPE MAKING PLANT [3320]

Concrete is a building material made by thoroughly mixing cement; sand; aggregate, such as gravel or crushed stone; and water in desired proportions. The cementitious material usually is hydraulic cement that sets and hardens in water. Initially, the concrete mix is a plastic material that assumes the shape of the mold into which it is cast. The mixture is poured into a cavity, an excavation in the ground, or a form designed for a specific purpose. After hardening, concrete has the appearance and structure of stone. In fact, it may be thought of as "moldable stone." When the mixture is deposited in its final position, it is known as cast-inplace concrete. When a concrete product or element is cast elsewhere (whether in a plant or on a field site) and then brought to its final position, it is termed precast concrete. Precasting is a manufacturing procedure, whereas casting-in-place is a construction procedure. Beina manufacturing operation, precasting can have certain advantages: o Work can be performed at a fixed site with accelerated . curing facilities. o A single location for batching and mixing concrete can be provided, o A convenient source of water and other raw materials can be used, o A location convenient to transportation facilities can be selected, o Mass production techniques can be employed. o Opportunities for storing product and working under shelter reduce the impacts of cyclical demand and weather conditions. RCC pipes are classified as pressure and non pressure pipes viz. NPI, NP2, NP3, P1. P2. P3 for use in specific conditions. These pipes are made from cement coarse and fine aggregate, sand, mild stee and HT rods and bars In IS 458, RCC pipes are classified in two major categories i.e. Non Pressure Pipes and Pressure Pipes. Pressure Pipes are further divided according their capacity to withstand hydrostatic pressure.

### COST ESTIMATION

Plant Capacity	650 Nos/Day
Land (20000sq.mt)	Rs. 10.17 Cr.
Plant & Machinery	Rs. 7.42 Cr.
W.C. for 2 Months	Rs. 12.22 Cr.
Total Capital Investment	Rs. 30.21 Cr.
Rate of Return	61%
Break Even Point	30%
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beverages.

## Start Your Own Industry

### **PP WOVEN SACKS MANUFACTURING UNIT [3321]**

PP woven sacks are becoming popular through out the world. This is because they are chemically inert & are water repellent & lighter in weight. They are free & possess sufficient strength & can easily be handled They are competitive in price with other type of bags also. Air permissible sacks made of polythene strips are used for packing potatoes, coconut etc. The only problem is that the Conventional using of hooks to lift cannot be used with PP bags These bags are expected to substitute jute and craft paper bags in several areas This would mean a considerable saving in foreign exchanges by avoiding recurring imports of multiwall paper which are at the order of Rs. 5 million per annum on one hand and on the other hand lead to an increase in foreign exchange earning in the country by releasing more jute for exports. These bags are free and posses sufficient strength and can easily be printed. These are competitive in price with other available type of bags for this purpose.

### COST ESTIMATION

Plant Capacity

10 MILLION PP WOVEN BAG/Day Land & Building (2000 sq.mt) Rs. 3.18 Cr Plant & Machinery Rs. 4.15 Cr W.C. for 2 Months Rs. 1.74 Cr Total Capital Investment Rs. 9.37 Cr Rate of Return 16% Break Even Point 66%

### **MULTI COMMODITY COLD STORAGE [3322]**

Any building or section of building that achieve controlled storage conditions using refrigeration can be regarded as a cold storage facility. Technically speaking, cold storage is a special kind of room, the temperature of, which is kept very low with the help of machines and precision instruments. Such a facility is usually employed for the preservation of perishable food products for extended time duration. Most countries adopt well recognized standards to be followed while designing and operating of all kinds of cold storage facilities. Energy efficiency in buildings employed for operating cold storages is achieved through multipronged approach involving adoption of bioclimatic architectural principles responsive to the climate of the particular location; use of materials with low embodied energy; reduction transportation energy; incorporation of efficient structural design; implementation of energy-efficient other building system components: and effective utilization of renewable energy sources to power the building. Thus, design and development of cold storages in India has always being a big issue in this sense. Indian climate

can be easily classified into six major zones: cold and sunny, cold and cloudy, warm and humid, hot and dry, composite, and moderate. Translation of bioclimatic architectural design in the Indian context therefore, provides anlethora experiences and success stories to learn from. Several buildings have come up. fully or partially adopting the above approach to design. India is having a unique geographical position and a wide range of soil producing variety of fruits and vegetables like apples, grapes, oranges potatoes, chilies, ginger, etc. Marine products are also being produced in large quantities due to large available coastal areas. The present production level of fruits and vegetables is more than 100 million MT and keeping in view the growth rate of population and demand, the production of perishable commodities is increasing every year. Number of cold storage units and total storage capacity in some major states of the country are provided. The farmers usually seek for favorable combination of circumstances to produce cash crops and earn remunerative prices. The consumers get the supply of perishable commodities with lower fluctuation of prices. Besides the role of stabilizing market prices and evenly distributing commodities both on demand basis and time basis, the cold storages also render several other benefits to the farmers and the consumers. Expensive raw materials like dry fruits, chemicals, essences and processed foods such as fruit juice/pulp, concentrate dairy products. COST ESTIMATION

MULTI COMMODITY Plant Capacity COLD STORAGE 500MT Land & Building Rented Plant & Machinery Rs. 56 Lacs W.C. for 1 Month Rs. 9.91 Lacs Total Capital Investment Rs. 74.91 Lacs Rate of Return 39% Break Even Point 59%

### UNSATURATED POLYESTER **RESIN** [3323]

Polyester resins are unsaturated synthetic resins formed by the reaction of dibasic organic acids and polyhydric alcohols. Maleic Anhydride is a commonly used raw material with diacid functionality. Polyester resins are used in sheet moulding compound, bulk moulding compound and the toner of laser printers. Wall panels fabricated from polyester resins reinforced with fiberglass so-called fiberglass reinforced plastic (FRP) are typically used in restaurants, kitchens, restrooms and other areas that require washable lowmaintenance walls. They are also used extensively in Cured-in-place pipe applications. Departments Transportation in the USA also specify them for use as overlays on roads and bridges. In this application they are known

as PCO Polyester Concrete Overlays. These are usually based on isophthalic acid and cut with styrene at high levels usually up to 50%. Unsaturated polyesters are condensation polymers formed by the reaction of polyols (also known as polyhydric alcohols), organic compounds with multiple alcohol or hydroxy functional groups, with saturated or unsaturated dibasic acids. Typical polyols used are glycols such as ethylene glycol; acids used are phthalic acid, isophthalic acid and maleic acid. Water, a by-product of esterification reactions, is continuously removed, driving the reaction to completion. The use of unsaturated polyesters and additives such as styrene lowers the viscosity of the resin. The initially liquid resin is converted to a solid by cross-linking chains. This is done by creating free radicals at unsaturated bonds, which propagate in a chain reaction to other unsaturated bonds in adjacent molecules. linking them in the process. The initial free radicals are induced by adding a compound that easily decomposes into free radicals This compound is usually and incorrectly known as the catalyst. Initiator is the more correct term. Substances used are generally organic peroxides such as benzoyl peroxide or methyl ethyl ketone Polyester resińs peroxide. thermosetting and, as with other resins, cure exothermically. The use of excessive initiator especially with a catalyst present can, therefore, cause charring or even ignition during the curing process Excessive catalyst may also cause the product to fracture or form a rubbery material. Polyester resins are the most widely used resin systems, particularly in the marine industry. By far the majority of dinghies, yachts and workboats built in composites make use of this resin system. Polyester resins such as these are of the 'unsaturated' type. Unsaturated polyester resin is a thermoset, capable of being cured from a liquid or solid state when subject to the right conditions. It is usual to refer to unsaturated polvester resins as 'polyester resins', or simply as 'polyesters'. There is a whole range of polyesters made from different acids, glycols and monomers, all having varying properties. There are two principle types of polyester resin used as standard laminating systems in the composites industry. Orthophthalic polyester resin is the standard economic resin used by many people. Isophthalic polyester resin is now becoming the preferred material.

COST ESTIMATION

Plant Capacity	10	MT/D	ay
Land & Building (6000 sq.mt.)	Rs.	3.04	Cr
Plant & Machinery	Rs.	1.23	Cr
W.C. for 1 Month	Rs.	2.58	Cr
Total Capital Investment	Rs.	7.05	Cr
Rate of Return		28	8%
Break Even Point		49	9%
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## Top Industries to Start

### **HOLIDAY RESORTS [3324]**

Holiday resorts business is very flourishing business these days not in India only but it has brilliant prospects in foreign countries like America, Canada, Singapore, Nepal etc. Now-a-days, in India, this business is very fruitful as people want full comfort and entertainment during their vacations. Today there are quite a good number of over 300 approved Holiday resorts and hotels comprising nearly 19,000 guest rooms. But the increase in rooms and supplementary forms accommodation such as motels, youth hostels camp centuries huts in resorts and has not kept pace with the demands. The capacity of Holiday resorts accommodation of international standard is already paying has without tourism potential. The Government has already drawn, a 10 year perspective plan to attract 3.5 million tourists by the end of next decades as against 0.8 million ratio between tourists arrival and number the Holiday of accommodation of international standard is already paying have without tourism potential. Now the Government owned Indian Tourism Development Corporation (ITDC) is gradually moving in this direction. India The India Tourism Development Corporation is making all the efforts to facilitate tourism to all corners of our country. In a holiday resort, there must be luxurious facilities added up to attract more and more tourists in which Table Tennis. Restaurant, Bar, Star Category Hotel, Swimming Pool, Banquet Hall, Shopping Arcade, Gym etc. are common.

### COST ESTIMATION

Land & Building (16 Acres)	Rs. 41 Cr.
Land & Building (16 Acres) Plant & Machinery	Rs. 4.35 Cr.
W.C. for 2 Months	Rs. 1.20 Cr.
Total Capital Investment	Rs. 47.23 Cr.
Rate of Return	20%
Break Even Point	54%

## FABRIC BLINDS MANUFACTURING UNIT [3325]

Xera Co Ltd. is well know Brand & Company in South Korea, 1st Largest Company in South Korea who having facilities of all process from Yarn to Ready Made Blinds under one Roof. SSG Furnishing LLP is also well know in India as Channel Partner of Xera Co Ltd who is selling over 4 Million USD Fabric after Importing from Korea. Polyester is a fine material that is often used to make blinds. It is sometimes blended with other materials like cotton and silk to improve its look, how it hang, and its texture. Polyester is easier to clean and more stable compared to other fabrics. Polyester is a type of synthetic fabric commonly used in clothes, suits, and blinds. This is a very strong and durable material. It is resistant to wrinkle, abrasion, stretching and shrinking. It can also be

dried quickly after washing, as it doesn't absorb too much water. As polyester is a very versatile material it comes in a variety of solid colours as well as vibrant patterns. There is no perfect formula in choosing the right curtain, but there are some tips to ponder when shopping for polyester curtain. Although polyester would not be considered a delicate material, the quality of the blinds made and sold by home deco shops should not be taken for granted. When shopping for blinds, it is important to know the exact length and width of the window. These measurements are an important guide to figuring out the the right size of blinds. It is also essential to consider in what part of the house these blinds will be hung. Polyester is a good type of material for most blinds, but the downside of it is that, since the air doesn't circulate well through this type of fabric. polyester blinds have the tendency to retain odours, and since polyester is a polymer, this material is also flammable. For these reasons, it is advisable that polyester curtain should not be hung in the kitchen as they will soak up cooking smells and due to the proximity of heat sources, they may catch fire. Remember that above all, the family's safety should be considered all the time. It is better i polyester blinds be hung in the bedroom or in the living area. Polyester is a commor type of textile used in most blinds. It can also be mixed with other material such as cotton, to enhance the features of polyester. Polyester can be identified by its silky texture that is soft to the touch. A curtain sporting a beautiful pattern can certainly be attractive to the eye. Consider choosing a nicely embroidered curtain However, for embroidered polyester curtain, make sure that the thread used in embroidery is also made of polyester thread. The reason behind is that some threads, like cotton, can shrink over time The best material to use in embroidering a polyester curtain is another polyester thread or one should consider silk thread. These materials do not wrinkle or shrink. **COST ESTIMATION** 

### Plant Capacity 270 Rolls/Day Land (25000 sq.mt.) Rs. 57.31 Cr.

 Plant & Machinery
 Rs. 60.37 Cr.

 W.C. for 3 Months
 Rs. 26.66 Cr.

 Total Capital Investment
 Rs. 145.90 Cr.

 Rate of Return
 35%

 Break Even Point
 48%

## SILICA RAMMING MASS PLANT [3326]

Ramming Mass is a Mixtures of graded refractory aggregate with or without air/ heat-setting additive and with or without moisture. It is usually supplied at a consistency which requires mechanical method of application. A plasticizing agent may also be incorporated in the ramming

masses. Silica Ramming Mass offered by us is basically a mixture of different particle sizes of quartz with some binder . chemicals. Silica Ramming Mass is Refractory used as lining in Induction Furnaces It is a dry lining refractory that can be used for all types of iron and steel and in both mini steel plants as well as foundries. Ramming mix is characterized by thermal stability, corrosion resistance and wear resistance because it contains less binders, fire clay and moisture compared to plastic refractories. Recommended for lining the iron melting coreless induction furnace. • Premixed with binder to customer's specifications Maximum recommended use limit 3092°F (1700°C). Silica ramming mass can safely be used up to an operating temperature of 1600°C it expands very little so it is superior to both alumina and magnesia to resist thermal shocks. Secondly its cost is very low in comparison to alumina and magnesia. It is produced by crushing and grading of good quality quartzite having very purity. The impurities present will produce Unpredictable and more amount of liquid phase at high temperature thereby lowering chemical and mechanical resistance of lining. High purity silica yields more lining life. It also results in considerable uniformity in physical properties. ely embroidered curtain. However, for embroidered polyester curtain, make sure that the thread used in embroidery is also made of polyester thread. The reason behind is that some threads, like cotton. can shrink over time. The best material to use in embroidering a polyester curtain is another polyester thread or one should consider silk thread. These materials do not wrinkle or shrink

### COST ESTIMATION

100 MT/Day
Rs. 1.67 Cr.
Rs. 7.30 Cr.
Rs. 1.13 Cr.
Rs. 10.14 Cr.
22%
68%

THINNER MANUFACTURING UNIT INCLUDING POLISH THINNER, METHANOL BASED, SYNTHETIC THINNER, MTO BASED, DENATURED SPIRIT BASED THINNER, NC THINNER, STOVING THINNER, THINNER FOR EPOXY PAINT, PU PAINT, ENAMEL PAINT THINNER, ACRYLIC PAINT THINNER, ETC. [3327]

Thinner is a hydrocarbon (naphtha) or oleoresinous solvent (turpentine) used to reduce the viscosity of paints to appropriate working consistency usually

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just prior to application. In this sense, a thinner is a liquid diluent to except that it has active solvent power on the dissolved resin. "Thinners" as the name implies, are added to varnishes and lacquers to thin them out usually to brushing consistency. White spirit is the commonest liquid used for this purpose. A thinner differs from a diluent in that it has solvent action on the dispersed resin or other solid and will not as a role cause precipitation. Solutions of resins, nitrocellulose, are often diluted in order to adjust their flow, rate of evaporation, cost or other property, with a liquid which is without solvent action on the dispersed solids. A good example is toluene when added for this purpose to a nitrocellulose lacquer. Such a liquid is termed simply a diluent. With the gradual addition of a diluent to a lacquer a point is reached at which the dispersed solid is precipitates out. The amount of diluent which can be tolerated before precipitation commences depends on number of factors. the solvent power or the solvent, nature of the diluent and concentration of solids tempt, etc. Hazard:- Flammable. dangerous fire risk, Shipping regulations: (ICC, CA, IATA) Red label. One basic criteria of a food thinner is that when a finger is dipped into the thinner and taken out, the thinner immediately evaporates leaning a white crust on the finger and a cool sensation is felt (as in the case of ICI thinner) and ICI is manufacturing, N-C thinners exclusively. In the thinner formulations, acetone is in corporate for cooling sensation. Besides, Diacetone is mostly used in thinner formulations, for shining purposes in paint and thinner industry. Solvents or Thinners are used in Paints and lacquers to reduce the viscosity and consistency of the material and facilitate the application of a uniform coating. They must be compatible with the oil or resin present. After application the solvent is no longer required and should evaporate completely from the film. Another class of organic liquids used in paint industry is plasticizers their function is to remain permanently in the film of paint or varnish after application in order to impart elasticity and proper adhesion to it. In contradistinction to the volatile solvents, plasticizers should be perfectly non-volatile, and should also be chemically stable, and not after in properties on prolonged exposure

### COST ESTIMATION

 Plant Capacity
 2000 Ltr/Day

 Land (3000 sq.mt)
 Rs. 1.36 Cr.

 Plant & Machinery
 Rs. 31 Lacs

 W.C. for 2 Months
 Rs. 82.14 Lacs

 Total Capital Investment
 Rs. 2.61 Cr.

 Rate of Return
 23%

 Break Even Point
 57%

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### MARRIAGE PALACE (WEDDING HALL) [3328]

Indian traditions are so rich and our emotional standards are so high that most of the ceremonies/functions become simply a monument of show-off and extravagance. Even an ordinary man spends so luxubirantly on the marriages that it becomes a burden on him for the whole life. But, crux of this evil is to be found out before lamenting on what hell is going on by way of marriages and parties of high standard. The moneyed people actually spend so extravagantly on these occasions that lower strata of people start feeling sort of nothingness if they don't perform their functions almost with the same pomp and show. In this way a bling race starts which ultimately ends in the bankruptcy and similar other brunts on the remaining life of the average or low strata of people who happen to perform such personal functions. An average man in the rising price conditions is even otherwise very much troubled. These extraordinary events break the very back bones of normal families whenever these occasions are celebrated. extravagance and personal show must go. But, how? Standardization is the answer. The government has been enforcing several laws against extravagance in marriages. But, these are of no result. The traditional Indian wedding, a chaotic mix of color, food, music and melodrama has undergone a makeover, and spawned a new industry. The marigolds are being replaced by orchids, the impromptu song dance by professionally choreographed performances, folk songs have given way to the latest Bollywood remixes and the cuisine is Thai, Italian, Vietnamese, you name it. Then add signature cocktails, bespoke wedding stationary, live twitter updates and more The Indian wedding is getting bigger and fatter and the wedding planner presiding over it is now a key part. No longer the preserve of the super-rich, upper middle class Indians are also looking to outsource their big day to professionals, from online planners to hands-on coordinators, who promise a glitch-free event. The stakes are high. In the top 15 cities of the country, people usually spend between 2 million rupees (\$30,000) and 20 million rupees (\$300,000) on three to five days of celebrations, and an estimated 10 million weddings take place every year. This makes it a \$3 billion dollar market, according to industry experts

### COST ESTIMATION

Land & Building (10 Acres)	Rs. 45 Cr.
Plant & Machinery	Rs. 57.50 Lacs
W.C. for 2 Months	Rs. 1.51 Cr.
Total Capital Investment	Rs. 47.26 Cr.
Rate of Return	13%
Break Even Point	56%
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## Start Your Own Industry

### MANGO, BANANA, HONEY, COCONUT & VEGETABLE PROCESSING PLANT [3329]

India is the second largest producer of vegetables in the world (surpassed only by China), accounting for about 10 per cent of the world's production. In 2002. India produced 78.2 million tons from 5.73 million ha of land, Indian farmers grow an amazing number that is 175 different vegetables but potato, tomato, onion, cabbage and cauliflower account for 60 per cent of total production. It is projected that the domestic vegetable requirements will rise from current levels of 83-91 million tons to 151-193 million tons by 2030. Indian farmers today cannot meet the high domestic demand for vegetables, as India imports approximately \$678 million of vegetables annually. To increase domestic vegetable production, improvements are first needed in the vegetable seed industry. There are now more than 50 seed companies developing new vegetable varieties, with increased emphasis on highvielding hybrids. The Indian Council of Agricultural Research has three major institutes for conducting research on vegetables: Indian Institute of Horticultural Research (IIHR) in Bangalore, Indian Institute for Vegetable Research (IIVR) at Varanasi, and Indian Agriculture Research Institute (IARI) in New Delhi. Almost all agricultural universities and the State Department of Agriculture are involved in vegetable research and development. Among the 25,000 plant scientists in India, at least 1,000 are conducting research on vegetables. To increase year-round vegetable consumption, the seasonality of production must be reduced. Processing can make vegetables more accessible year-round, but less than 7 per cent of India's vegetable production is processed. Another factor that limits consumption is post-harvest damage. Currently 20-25 per cent of vegetables produced are lost due to poor post-harvest handling, and in the case of tomato and cabbage. Post- harvest losses are as high as 60 per cent. To remedy these losses, special cold storage vegetable markets and supermarkets are emerging in metropolitan areas. Specialized vegetable marketing centers are organized in strategic locations and vegetables farmers receive assistance to transport and systematically market their produce. Banana is a globally important fruit crop with 97.5 million tones of production. In India it supports livelihood of million of people. With total annual production of 16.91 million tones from 490.70 thousand ha., with national average of 33.5 T/ha. Maharashtra ranks first in production with 60 T/ha. Banana contributes 37% to total fruit production in India. Banana is one of the major and economically important fruit crop of Maharashtra, Bananas occupy 20%

area among the total area under crop in India. Maharashtra ranks second in area and first in productivity in India. Jalgaon is a major Banana growing district in Maharashtra which occupy 50,000 hectares area under Banana. But most of Banana is grown by planting suckers. The technology development in agriculture is very fast, it results in developing Tissue Culture Technique. Banana is highly nutritious and easily digestible than many other fruits. Digestion time of banana fruit is less (105 min) than apple (210 min). Bananas are popular for aroma, texture and easy to peel and eat, besides rich in potassium and calcium and low in sodium content.

### COST ESTIMATION

Land & Building (8 Acres)	Rs. 13.46 Cr
Plant & Machinery	Rs. 12.80 Cr
W.C. for 3 Months	Rs. 47.25 Cr
Total Capital Investment	Rs. 74.65 Cr
Rate of Return	22%
Break Even Point	52%

### **LITHIUM SILICATE [3330]**

The global Lithium Silicate market is valued at 50.3 million USD in 2016 and is expected to reach 73.7 million USD by the end of 2022 growing at a CARG of 0.68% between 2016 and 2022. The global lithium compounds market is projected to reach USD 5.87 billion by 2020, at a CAGR of 13.22% between 2015 and 2020. The lithium compounds market is driven by various end user industries such as li-ion batteries, glass & ceramics and others. Also, factors such as increase in use of portable devices using li-ion batteries, switch from fuel-burning cars to electric vehicles & increasing focus of consumer government agencies towards environmental concerns are driving the growth of the market. Li-ion batteries is the largest application segment, The use of lithium compounds is increasing across applications such as li-ion batteries, glass & ceramics, medical, and others. With the growing demand for lithium compounds in end user industries, its consumption is also expected to rise between 2015 and 2020. Asia-Pacific the largest geographical segment, Asia-Pacific is the global leader in the consumption of lithium compounds, and is expected to dominate in the coming years. China, Japan, and South Korea are the key countries in this region. The Asia-Pacific market is expected to grow at the highest CAGR from 2015 to 2020.

### COST ESTIMATION

Plant Capacity	1 Ton/Day
Land & Building (800 sq.mt)	Rs. 1.20 Cr.
Plant & Machinery	Rs. 50 Lacs
W.C. for 2 Months	Rs. 1.84 Cr.
Total Capital Investment	Rs. 3.58 Cr.
Rate of Return	41%
Break Even Point	44%

## SUCCINIC ACID PRODUCTION [3331]

Succinic acid is a very important platform chemical that offers access to a wide range of products that address a number of high volume chemical markets. Succinic acid is mainly produced by chemical processes, via hydrogenation of maleic anhydride to succinic anhydride, followed by hydration to succinic acid. Bio-based or fermentative production of succinic acid offers many advantages over chemical processes owing to its simplicity and environmental friendliness. In addition to the energy savings that accrue by substituting biomass for petroleum, carbon dioxide is used in the fermentation process thereby reducing greenhouse emissions. Succinic Acid is a four-carbon molecule with a chemical structure similar to maleic anhydride (MAN), a petroleum derived chemical widely used as a primary raw material to make products ranging from food packaging and pharmaceutical products, to detergents and plastics. The use of fossil fuels as chemical feedstocks has given rise to health and environmental concerns, which have spurred the development of more sustainable, ecofriendly processes that create chemicals from renewable resources. Succinic acid. also known as amber acid or butanedioicacid, is a dicarboxylic acid having the molecular formula ofC4H6O4 After its first purification of succinic acid from amberby Georgius Agricola in 1546, it has been produced by microbia fermentation for the use in agricultural, food and pharmaceutical industries. Currently, most of commercially available succinic acid is produced by chemical process; in which liquefied petroleum gas (LPG) or petroleum oil is used as a starting material. This plant has been designed to produce succinic acid and focused on all . aspects that are important for the production of succinic acid. The plant is located at (Location) and this report will explain thoroughly on the details about the variation of methods, process selection, the reaction being generated and the description on the production of succinic acid. A process for the bio-based production of 37,500 mt/yr succinic acid using glucose as a feedstock. The process is environmentally friendly in that it uses CO2 in the fermentation to improve the yield and productivity of succinic acid. The succinic acid produced in the fermentation broth was recovered and purified by series of filtration, reactive extraction, vacuum distillation crystallization, washing, and drying to produce99.5 wt% succinic acid crystals. This plant considers full safety of overall plant operations starting from the handling of raw materials until the recovery of final product. The product will be sold to local and foreign markets and being used as a

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raw material for other manufacturing purposes

### COST ESTIMATION

Plant Capacity 125 MT/Day Land & Building (60600 sq.mt) Rs. 45 Cr. Rs. 46.19 Cr. Plant & Machinery W.C. for 1 Month Rs. 66.16 Cr. Total Capital Investment Rs. 168 Cr. 63% Rate of Return Break Even Point 28%

SWR PVC PIPE LINE FROM 40MM, 50MM, 75MM, 110MM. 160MM, 200MM AND 250 MM PIPES AND FITTINGS OF 75MM **AND 110MM SIZES ONLY AND CPVC PIPE PRODUCTION LINE UPTO 50 MM WITH COMPLETE** FITTING COMPLETE LINE WITH INJECTION MOULDING MACHINES WITH MOULDS.

[3332]

PVC (unplasticized polyvinylchloride) pipes and fittings exhibit excellent resistance to aggressive environments both naturally occurring and as a result of industrial activity. They are resistant to almost all types of corrosion, either chemical or electrochemical in nature. Since PVC is a non-conductor, galvanic and electro chemical effects do not occur in PVC pipes. PVC Pipe and Fittings have got tremendous demand in India as well as in abroad. To manufacture this, all the machinery and raw materials are available indigenously. SWR pipes also known as PVC SWR Pipes are available with one end as plain and other ends as selfsocketed with an integral groove to hold the rubber gasket. When joined with a rubber ring, the joint formed is a water tight. This rubber ring joint takes care of thermal expansion/contraction in the pipes. • These Pipes are Lead Contaminant Free leading to superior quality, • These Pipes is a fully backward integrated manufacturer with complete control of raw material used to generate unbeatable quality.

### COST ESTIMATION

Land & Building (2000 sq.mt)	Rs. 2.49 Cr.
Plant & Machinery	Rs. 3.90 Cr.
W.C. for 2 Months	Rs. 2.57 Cr.
Total Capital Investment	Rs. 9.50 Cr.
Rate of Return	21%
Break Even Point	56%

### **UPVC(SWR) PIPES, CPVC PIPES** & PIPE FITTINGS [3333]

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chemical or electrochemical in nature Since PVC is a non-conductor, galvanic and electro chemical effects do not occur in PVC pipes. PVC Pipe and Fittings have got tremendous demand in India as well as in abroad. To manufacture this, all the machinery and raw materials are available indigenously. SWR pipes also known as PVC SWR Pipes are available with one end as plain and other ends as selfsocketed with an integral groove to hold the rubber gasket. When joined with a rubber ring, the joint formed is a water tight. This rubber ring joint takes care of thermal expansion/contraction in the pipes. • These Pipes are Lead Contaminant Free leading to superior quality, . These Pipes is a fully backward integrated manufacturer with complete control of raw material used to generate unbeatable quality.

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Land & Building (2000 sq.mt)	Rs. 2.49 Cr.
Plant & Machinery	Rs. 3.90 Cr.
W.C. for 2 Months	Rs. 2.57 Cr.
Total Capital Investment	Rs. 9.50 Cr.
Rate of Return	21%
Break Even Point	56%

### **ELECTROFORGED GRATING MANUFACTURING PLANT [3265]**

Grating is open grid assembly of metal bars, in which the bearing bars, running in one direction, are spaced by rigid attachment to cross bars running perpendicular to them or by bent connecting bars extending between them. Grating is a structural element that has a high load-bearing capacity with a low dead weight and a high level of transparency. The positive-fitting connection of the bearing bars and cross bars with the surround make the grating not only a very stable, but also visually attractive product. The applications are very diverse, as grating is used everywhere in industry and architecture. As an extremely robust, safe yet light platform flooring, the grating is indispensable in all areas of heavy industry. Grating is installed in refineries, power stations, steel mills, mines and on oil platforms. Grating is being used increasingly more in the logistics industry as platform flooring and shelves Architects and building owners appreciate the grating as a product which is both aesthetically pleasing and functional, be it used as a decorative facade cladding, a suspended ceiling or sun shield. Steel grating is a kind of open steel member with its bearing bars & cross bars jointing at their intersections either by welding or by locking, Electroforged Steel Gratings are made using the electroforging process. In this process, the square twisted rods (Cross Members) are fused into the main load bearing members at using a special welding machine at very high current and tonnage. The Cross Members are properly

set-in the Load Members such that it projects out of the grating top member by only a little more than 1 mm. This improves the slip resistance during walking. Electroforged Grating Panels are generally manufactured to 6000 mm lengths. Grating is composed of following member. Load carrying bars made from steel strip or slit sheet or from rolled or extruded aluminum and extending in the direction of the grating span. Bearing bar types Steel grating is made up of bearing bar and cross bar as certain distance by welding or pressure locked. Bearing bar have the types: flat type (also called plain type), serrated type, I bar type (I plain type and I serrated type). According to the bearing bar materials, there are carbon steel bars, mild carbon steel bars, stainless steel bars and so on. Flat type bearing bars are made from steel strip or slit sheet or from rolled steel. These are produced using high quality steel materials which exhibit good hardness, ductility and tensile strength. Our bearing bars provide extremely good level support for floor joists. They have excellent finishing and based on clients' need we provide them with untreated, galvanized or painted bearing bars. Surface of Load Bearing Bar is Plain. Commonly used size - 25 x 3 mm. Commonly used pitch - 23 mm. Applications: flat type bearing bar gratings are the most widely used gratings, available for flooring sidewalk, all kinds of ditch cover, stair tread, etc. Serrated type - bearing bars delivers excellent performance in application areas, which are slippery, oily, moisture filled. They form a sort of anti-slip grating with their non-slip notches offering them a very good grip. They are made using mild carbon steel or stainless steel materials. We offer variety of serrated products in this category such as, normal serrated, serrated interrupted, serrated trapezoid, serrated carrier bar and serrated carrier bar with cross bar. For inclined gangways with a pitch of 10-25 degrees, we also provide grating with tread strips. Notches are made on tip of the Load Bearing Bar to improve skid resistance

### COST ESTIMATION

Plant Capacity	9 MT/Day
Land & Building	NÍI
Plant & Machinery	Rs. 1.37 Cr.
W.C. for 1 Month	Rs. 1.29 Cr.
Total Capital Investment	Rs. 2.94 Cr.
Rate of Return	71%
Break Even Point	50%
	******

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Audio cassettes parts by injection moulding Automobile injection moulded plastic components Automotive lights and injection moulded plastic components B.o.p.p. film Baby bottles (plastic) with white silicon rubber nipples Baby nipple (big size) Baby nipple (silicon) Bakelite moulding powder Ball pen manufacturing (automatic plant) Ball pen refills & inks Balloon plastic advertising Bath tub (acrylic) Blister film pvc Blister packaging & pouch packaging Blow moulded plastic container Blow moulding machine fabrication Blow moulding plastic container Bonn film Bopp pressure sensitive self

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Ceramic insulators (h.t.) (11kva & above upto 100 kva) Co-extruded multilayer (5layer) film with printing Coating on metal plastic (pvc) Coating on metalized polyester film/ metalised paper/aluminium foil Coating on metallised polyester film/metallised paper/ aluminium foil Coating on plastic (electrolysis) & glass Colour coating on plastics Colour master batches for various plastics Computer ribbon cartriges Copper rod wire drawing & pvc wire & cables Corrugated poly carbonate Corrugated polycarbonate sheet Cosmetics and plastic packaging materials manufacturing Country liquor bottling plant (1,00,000 bottless/day) Country liquor bottling plant (10,000 ltr/day) CPVC & UPVC RIGID PIPE FITTING Cpvc pipes and fittings D.o.p. and other plasticizers Desiccants or moisture removers in granules, sticks and powder Dextrose i.v. injection Dextrose saline (i.v. fluid) Dextrose saline (i.v.fluid) in plastic bottles Discount/credit card Disposable cups, glasses etc Disposable plastic cups, glasses etc. Disposable plastic razor Disposable plastic syringes & needles Disposable plastic syringes (sterilised) Disposable plastic syringes with needle plant Disposable syringes with needle plant Dop and other plasticizer Double wall corrugated (dwc) hdpe pipes (size upto 1500mm) Dough moulding compound (dmc) Dough moulding compound (dmc) bulk moulding compound (bmc) sheet moulding compound (smc) Dough moulding compound (dmc), bulk moulding compound (bmc), sheet

moulding compound (smc)

Dwc (double wall corrugated) pipes (40mm-600mm size) Electric switches, plugs, sockets and other accessorie Erw steel conduit pipes Eva (ethylene vinyl acetate) sheet Expanded cellular polyethylene sheet Expanded polyesterene extrusion profiles Expanded polyestrene moulding (thermocole) Expanded polyethylene Expanded polyethylene flexible foam Eye drop 3 pieces (plastic vials) Eye drop 3 pieces (plastic vials) Fibre cotton from silica sand (beach sand) Fibre glass sheets Fibre reinforced plastic (high pressure moulding with smc, bmc & dmc) Flat pvc laminated safety glass/toughened glass Flexible p.u. foam Flexible packaging (rotogravure printing) Flexible polyurethane foam Flexible polyurethane foam Flocculants Flushing cistern Formaldehyde crockery & other items Formaldehyde resin (urea, phenol, melamine) Frp auto, scooter roofs & ceilinas Frp helmet Frp molded grating manufacturing unit Frp products (helmet, washbesin sheets, roofing sheets) G.i.pipes Glass beads Glass bottles Glass bottles from scrap Green house for crops production ( 10 green houses) Gypsum moulding & gypsum board Gypsum plastic board (automatic plant) H.d.p.e. bottles H.m bag plant with printing unit Hdpe & Idpe pipes & fittings Hdpe bags Hdpe coated paper sack Hdpe container, polyjars by

injection moulding (food grade

Hdpe double wall corrugated

Hdpe containers (blow

moulding)

pipes (40mm to 200mm pipe dia) Hdpe drums & barrels Hdpe drums & barrels Hdpe drums manufacturing Hdpe ducting for telecom cables and hdpe pipes Hdpe fishing net Hdpe fishing net (from granules to fish net) Hdpe jerry cans Hdpe manufacturing from ethylalcohol Hdpe pipe & fittings Hdpe pipe manufacturing unit Hdpe pipe manufacturing unit (75 mm extruder) size 1 inch to 5 inch od Hdpe pipes Hdpe pipes Hdpe pipes manufacturing unit (75mm extruder) size 1 inch to 5 inch od Hdpe plastic bottle Hdpe printed bags Hdpe twines & ropes Hdpe/pp box strapping Hdpe/pp woven bags for cement industry (cap: 120000 bags/ day) Hdpe/pp woven sacks Hdpe/pp woven sacks (bags) Hdpe/pp woven sacks using circular looms Hdpecontainers (bottles) for usfda approved pharmaceutical products (size 60cc, 90cc, 150cc, 200cc) Helmet Helmet and accupressure seat cover Hologram stickers 3d Household plastic products I.v.fluid in plastic bottles Ice cream cup (plastic) Injection & blow moulded plastic products Injection moulded auto components Injection moulded energy meter boxes and security seal Injection moulded plastic auto parts Injection moulded plastic halls Injection moulded plastic components Injection moulded plastic components with tool room Injection moulded plastic products Injection moulding Injection moulding for

room Injection moulding of chairs Injection moulding of chairs Ink plastisol (phthalate free) Integrated complex esters & allied products Intravenous fluid plastic bottle lv plastic bottle Joint sealants (silicons, acrylic, polysulphid & polyurethane base) Kitchen products made of stainless steel viz.(kitchen rack folding and fix,tokri for keeping vegetables patre, frooti for vegetables (wire, round pipe, square pipe) shelf,towel stand,cylinder trolley,kitchen stand wire, pipe, sheet) L.p.g. bottling plant Lami tube manufacturing Lamination of co-extrusion multi laver film in roll form Lamination on hdpe woven clothes Ldpe from ethyl alcohol Ldpe moulded products Ldpe/micro sheet & sole Lpg cylinder bottling plant M.d.p.e. pipe extrusion (medium density polyethylene) Manufacturing medical plastic like catheters, syringe, dextrose saline (i.v.fluid) in plastic bottle, iv set cannula and related materials Master batches (coloured, pvc, ldpe, hdpe) Melamine formaldehyde resin Micro irrigation product manufacturing plant Mineral water (in pouches and plastic bottle) Mineral water cum pet bottle manufacturing unit Moulded luggage Multi layer co-extrusion, 3 layer - film with lamination & printing Multilayer (3 layer) film with lamination & printing Multilayer bags (3 layer) Natural mineral water in plastic glasses and jars Non woven carpet (wadded with polyester fibre) Non woven fabric bags (shopping bags) Nylon granules from nylon waste Nylon net for giving shade to tea plant in nursery Nylon zip fasteners Ortho phthalic polyester P.p.film P.u. (polyurethane) rigid foam (puf) P.v.c. flexible pipes

plastic components with tool

P.v.c. leather cloth (rexine) P.v.c. pipes and fittings Packaged drinking water (packed in 330 ml cup,500 ml bottle, 1500 ml bottle and 20 Itr jar) Packaged drinking water (packed in bottles, glasses & jars) Packaged water/ mineral water and soda water (packed in bottles, glasses & jars) Paper based phenolic sheet for electrical Pet (polyethylene terephthalate) resin Pet (polyethylene terephthalate) resin Pet bottle & caps Pet bottle & mineral water Pet bottle/containers Pet bottles Pet bottles (amber/clear in colour) cap.15ml, 60ml, 100ml 135ml, 200ml & 500ml Pet bottles for pharmaceutical industry on single stage blow moulding machine Pet bottles from pre- form (cansules) Pet bottles in cap:500ml, 1 ltr, 2 Itrs. 5 Itrs. used for packaged drinking water, edible oils, alcoholic beverages (country liquor & imfl) etc. Pet bottles manufacturing (small size) for pharmaceutical industry on (single stage blow moulding machine) Pet bottles manufacturing (small size) for pharmaceutical industry on (single stage blow moulding machine) Pet granules (dana) Pet pre-form Pet preform cum pet bottles Pet preform from pet resin Pet preform manufacturing (all types) Pet preform manufacturing (assorted) Pet preform pet bottles cum mineral waters Pet recycling unit (2000 kg/ day) Pet recycling unit (pet granules from pet waste) Pet virgin granule processing (1000 ton/year) pet granules/ dana) Phenol formaldehyde resin Phenolic resin Photo emulsion for rotary screen of nickel metal and flat screen of polyester/nylon fabric (sodium bicchromate type etc)

Plastazote polythylene from used for fibre cable joint Plastic (nylon) niwar Plastic auto parts Plastic auto parts Plastic bags for garment exporters Plastic bangles by injection moulding machine Plastic beads from plastic scraps Plastic bottles & caps Plastic bucket and doli Plastic buttons Plastic cane Plastic cans Plastic collapsible tube Plastic compounding Plastic corrugated sheet & boxes Plastic cravon Plastic crayons Plastic doors (sintex type) Plastic doors and windows Plastic filler master batches and other master batches Plastic film & sheets with printing flexo & roto/ldpe/ hdpe/pp/hm/pvc Plastic filter master batch & other master batches for various plastics Plastic goods Plastic granule Plastic granule from waste Plastic granules and injection moulded products Plastic granules from fresh Plastic granules from plastic waste and plastic rope (sutli) making plant Plastic granules from plastic waste and sutli making plant Plastic granules from scraps/ wastes Plastic granules from waste Plastic granules or powder from plastic scrap Plastic injection molded automobile components Plastic injection moulded tv cabinets Plastic injection moulding products Plastic injection moulding, blow moulding & pet bottles products Plastic items manufacture from powder melamine Plastic jerry cans Plastic mats Plastic mats production from polypropylene Plastic milk crate and plastic fish crate

Plastic moulded components

Plastic pet doors from waste

pet bottles Plastic pipes & tarpaulines Plastic plant (blow moulding & injection moulding) Plastic products (gold, nickel, silver) Plastic recycling and plastic products plan (tanks, buckets, mugs, jugs, dustbin, road divider etc) Plastic rope Plastic sheet from scrap Plastic spoons, forks and glasses Plastic spoons, forks, glasses, cups and other plastic items Plastic tanks h.d.p.e (sintex type) Plastic tooth pick Plastic toys Plastic tranparent granules Plastic transparent granules for shoe lighting system Plastic tube & hdpe fabric Plastic waste recycling plant (rufia washing) Plastic waste recycling plant (rufia washing) Plastic waste recycling unit Plastic waste recycling unit Plastic waste recycling unit & pyrolysis plant from plastic and rubber waste (integrated unit) Plastic water storage tanks (hdpe) (sintex type) Plastic water storage tanks (rotational moulded) Plastic wire netting **Plasticizers** Poly carbonate resin Poly carbonate sheet Poly packs of polyethene film Poly propylene oxide Poly-vinyl flooring Polyester beading Polyester film Polyester varn dyeing Polyester zip fasteners Polyethene bottles for mineral water Polyethene bottles for miniral water i.v. fluids etc. Polymer pencil Polyol used for polyurethanes Polypropylene & multifilament spinning yarn Polypropylene (pp) box strapping Polypropylene cast film Polystyrene Polythene bags & automatic printing Polythene bags (printed) Polythene bags and printing (Idpe/pp/hm bags with flexographic rotogravure

Polythene bags manufacturing Polythene shopping bags Polythene shopping bags Polythylene woven sacks Polyurethane dispersion Polyurethane foam & its products Polyurethane foams & its products Polyurethane releasing agent Polyurethane sandwich panels used in transport refrigerators & cold storage Polyvinyl acetate emulsion Polyvinyl butyral resin Pp woven bags for cement & Pressure sensitive adhesive for bopp tapes (acrylic based) Project Reports To Start New Industry on Plastics and allied projects (injection/blow moulding/acrylic/pvc/hdpe/pp/ abs/pet/bopp) Propylene film (printed) & bag manufacturing Ptfe component Pu rebonded foam Pu/pvc sole for sport shoe by imported m/c Pvc & cpvc pipe manufacturing plant Pvc battery container manufacturing and assembling of lead acid storage battery Pvc battery separator Pvc compounding (electrical grade) Pvc compounds (fresh) Pvc compounds (scrap) Pvc conduit pipe Pvc cover & files (conference bags, folders, file covers, diary covers etc.) Pvc electrical insulating tape Pvc extrusion bits Pvc extrusion profiles Pvc film Pvc fittings Pvc flexible fusible powder heat fusible powder Pvc flexible pipes Pvc flush cistern Pvc footwear Pvc granules (for insulation & sheet grades) Pvc granules from pvc scraps (with pollution control) Pvc granules from waste Pvc hoses Pvc industrial products Pvc industrial products (injection moulded) Pvc insulation tape Pvc leather cloth (rexine)

printing

Market Overview Cum Detailed Techno Economic Faeasibility Report on all Projects are available contact: ENGINEERS INDIA RESEARCH INSTITUTE

4449, Nai Sarak, Main Road, Delhi - 110 006 (India) \* Ph. : +91 9811437895, 9289151047, 91-11-23918117, 43658117, 45120361 Email: eiri@eiriindia.org, eiriprojects@gmail.com Website: www.eiriindia.org, www.eiribooksandprojectreports.com

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Pvc non-woven mat Pvc pipes Pvc pipes & fittings Pvc pipes (flexible for irrigation) Pvc pipes and fittings Pvc plastic film sheet soft/ Pvc profiles (door and window) Pvc resin & compounds Pvc resin from calcium carbide Pvc rular Pvc stabilizers (single pack system) Pvc wire & cable Pvc wire and cable Pvc wire and cable with drawing R.f.coaxial cables Rainbow colour on pvc film & sheet Red mud pvc pipes & fittings Resin coated sand rexine Rexine cloth & allied products Rigid pvc compounded granules for injection moulded Rigid pvc pipe, hdpe pipe and fitting Rigid pvc pipes, hdpe pipes & fittings Rubberised coir pu foam composit mattresses Safety belts Sign board Silver & gold plating on pvc & nylon 6 Smart card Soda water bottling plant (carbonated) Spectacle frames (plastic) Spun bonded non woven fabric Sugarcane juice in tetrapack Swr Pvc Pipe Line From 40mm, 50mm, 75mm, 110mm, 160mm, 200mm And 250 Mm Pipes And Fittings Of 75mm And 110mm Sizes Only. And Cpvc Pipe Production Line Upto 50 Mm With Complete Fitting Complete Line With Injection Moulding Machines With Moulds. Synthetic felt (plastic based) used in paper mill Synthetic iron oxide Synthetic pearl coating on polystyrene beads Technology of plastic

additives with processes and

packaging (hand book) Teflon coated electric cable Teflon manufacturing Teflon tape Teflon tape, rod & sheet Teflon tapes & cables Thermocole based disposable glass, cups & plates Thermocole sheet Thermocole sheet & moulded products . Thermoformed cups, plates & glass with hips sheet Thermoformed packaging (blister packaging & pouch packaging) Thermoplastic polyurethane Thermoplastic powder for road makina Thermoplastic powder for road making Tooth brushes Tubular steel swaged type nole Unsaturated polyester for rexine Unsaturated polyester resins Upvc doors & windows Upvc doors & windows profiles . Upvc doors and windows fabricating (fixing and installation of doors & windows of upvc profiles) Upvc profiles (doors & UPVC(SWR) PIPES, CPVC PIPES & PIPE FITTINGS Vegetable crate (plastic) Vegetable crate (plastic) Vinyl asbestos & pvc wall paper Viton (fluoro elastomer) Waste Paper To Produce Egg Trays X-ray film

### Power Plant (Hydro, Hydel, Lignite, Bio Gas, Gas Based, Coal, Solar, Wind Energy)

X-ray photography developer

& fixer (powder based

Xipe armoured cables

formulations)

Briquetted pelletized hard coke Captive power plant using rice husk and coal (convertable) Captive power plant using rice husk and coal (convertible) Coal briquetting from coal Furnishing fabrics on power loom

High temperature thermal insulation ceramic fibre Portable solar power systems (solar panels, solar lantern, portable solar home lighting systems, solar panel for fans, solar water pumps etc) Power factor capacitors Power inverters Power plant (coal, molasses etc. based) Power plant (coal, molasses etc. based) Power plant (coal, molasses) Power plant (gas based) Power plant (thermal) Power plant from lignite coal Solar lead acid battery Solar power plant Solar powered rickshaw Solar water heater manufacturing plant Spray pump manufacturing & assembling (hand spray,foot spray & power spray) Tubular steel swedge type pole for power distribution and street lighting pole Wind energy power plant

## Products From Wastes (Agro Based And Industrial Waste)

Activated carbon from

coconut shell Bio fertilisers Carpet from cotton waste Cement from rice husk Coconut shell powder Crude oil bleaching for petroleum jelly Fatty acid from waste vegetables Fuel briquettes from agro waste Furfural from rice hull/husk Hard board from bagasse Hard board from rice husk Kraft paper from 100% waste paper Kraft paper from bagasse Kraft paper from waste carton boxes Kraft paper from waste paper (paper waste recycling unit) Ossein and gelatine Oxalic acid from rice husk Paper cones & tubes Paper from rice husk & wheat husk Paper waste recycling plant (paper mill) Paraffin wax from slack wax

Particle board Pectin from mango peel Pectin from orange peels Plastic granule from waste Plastic granules or powder from plastic scrap Plastic waste recycling plant (rufia washing) Polyester yarn from waste Power plant (hydro based) Precipitated silica (cap:10 (bat Production of bio oil for power generation from coffee husk Re-refining of used engine oil Reclamation of nickel spent catalyst from vanaspati Reclamation of used bleaching earth Reconditioning of empty cement jute bags Reconditioning of fluoroscent tube Reconditioning of picture tube Recovery of gold from p.c.b & other electronic waste Recovery of lead from disposed lead acid battery Recovery of silver from waste Recovery of silver nitrate from photographic waste fixer Recycling of rubber from old tyres Recycling of waste cellulose acetate into cellulose acetate sheets Recycling of waste cellulose from baby diapers, pantyliners/ feminine napkins manufacturing Rubber goods from waste rubber Rubber reclaiming Rubber reclamation (reclaim rubber) Secondary lead extraction by scrap battery plates, pipes & sheet Silicon from rice husk Silk waste processing and pninnig Silver extraction from waste hypo solution (x ray film and cinema film) Sodium silicate from rice husk Technology of products from wastes industrial, agriculture,

medical, municipality, organic

Toluene and sbp from crude

& biological (hand book)

Market Overview Cum Detailed Techno Economic Faeasibility Report on all Projects are available contact:

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naphtha Tread rubber Utilization of coconut husk in manufacturing of rope Vermi composting Zinc and copper sulphate from brass ash Zinc metal from zinc ash

### Pulp, Paper, Straw/Grey Board, Stationery And Paper Based Projects

Adhesive for paper board All pins & gem clips Alum for paper industry Ammonia paper Anti-foaming agent (silicone based) for distillery, sugar industry, paper plant etc. Ball point pen,refills & ink Carbon black Carbon less paper Carbon paper Card board Card board boxes (like moov type etc) Carton box Cellphane paper Coating on metallised polyester film/metallised paper/ aluminium foil Computer continuous stationery Computer forms & security printing press Corrrugated boxes (fully automatic plant) Corrugated board & box (printed & laminated) Corrugated board & boxes from card boards Corrugated boxes Corrugated boxes (fully automatic plant) Corrugated boxes plant (semi automatic plant) Corrugated cartons from plain papers Corrugated packing & material (bulbs & tubes packing) Corrugated paper Corrugated sheet board & boxes (printed & laminated) Corrugated sheet board and boxes Desktop publishing Diaper industry (adult and

Digital photopaper/inkjet photopaper Disposable paper cups and glasses Disposable paper cups, glasses & plates Drinking straw paper Dtp cum offset press Duplex board Ecg paper Ecg trays from pulp Egg tray Egg tray from pulp Emery paper Emery paper (sand paper) Emery sand paper Exercise note book and register making unit Exercise note book and registers automatic plant Exercise note book industry like classmate Exercise note book, register & Flexographic ink Fountain pens Graphite pencil Greeting card by offset press Hand made carpet manufacturing Hand made paper Hand made paper Hand made paper filter paper Handy craft Hard board Hard board from bagasse Honeycomb paper pallets Import of journals, books cd rom and online database Insulating paper Kraft paper Kraft paper from 100% waste paper Kraft paper from bagasse Kraft paper from waste carton boxes Kraft paper from waste carton boxes (55 tpd) Kraft paper from waste paper (40 tpd) Kraft paper from waste paper (paper waste recycling unit) Laminated packaging paper with printing Lamination & coating on paper Lamination & coating on paper Mg paper from waste paper

Mill board based on rice straw

Mill board from rice & wheat straws Mill board from waste paper Mill paper from waste paper Mineral paper manufacturing (stone paper) Mini paper plant Mini paper plant from sisal Mono carton, inlay cards, folders & danglers Multi wall paper sacks News print paper News print paper News print paper from rice straw/bagasse Newspaper for children Newsprint paper manufacturing Non-woven carry/shopping Note book & registers etc Offset & treadle type printing Offset printing press Packaging material corrugated sheet board and boxes Paper & board from straw Paper & paper products Paper & pulp Paper (tissue) pulping from sawdust Paper based phenolic sheet (for electrical appliance) Paper board carton Paper carry bags Paper coated and aluminium wire (double coated) Paper cones & tubes Paper cones for loud speakers Paper core Paper cup for ice cream Paper envelopes Paper files Paper from akra Paper from bagasse with corrugated board & boxes Paper from bamboo Paper from poplar Paper from rice husk & wheat husk Paper from tree bark, eucalyprus wood Paper glasses for beverages Paper hand carrier bags (small and bg sizes) Paper labels for beer bottles coated by high speed fully automatic machine

Paper napkins Paper packaging Paper packaging Paper plant (white writing & newspaper for pulp & waste paper) Paper plant (writing and printing paper) Paper plant with dtp & printing & publishing unit Paper plates, glass, cups manufacturing with alminium foil coated paper sheet Paper plates, paper glass Paper shopping bags Paper tubes and composite container Paper tubes spiral binding composit container Paper waste recycling plant (paper mill) Particle board & black board with sanding & lamination of particle board Particle board from rice husk Plastic crayons Playing cards Polymer pencil Pouch filling & making for tomato sauce Printed corrugated boxes Printed corrugated boxes Processing of paper for feeding in computer Pulp from bamboo & wood Pvc coating on paper Rosin sizing agent (for paper plant) Sand paper Sanitary napkin & baby diaper Silicon coated paper Stencil paper Straw board & grey board Straw board & mill board Straw board & paper board Straw board and hard board (automatic plant) Tetra pack for milk packaging, ahee & other liquids Tissue moist toiletery cleansing tissue & related products Tissue paper Tissue paper facial Tissue paper pulping from saw dust Tissue paper rolls

Paper lable for beer bottles



### TERMS AND CONDITIONS

Ask for the quotation for the required project report at eiritechnology@gmail.com or eiriprojects@gmail.com
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